

Release A CDR RID Report

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Originator Al Fleig

Phone No 301-286-7747

Organization MODIS Instrument

E Mail Address afleig@ltpmail.gsfc.nasa.gov

Document Release A Test Requirements

RID ID	CDR	31
Review	SDPS/CSMS	
Originator Ref	MODIS/SDST-0	
Priority	2	2

Section

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Figure Table

Category Name Processing (DPS) Design

Actionee Project (Rama)

Sub Category

Subject Need for convergence between instrument Teams and ECS with regard to goals for Release A test program.

Description of Problem or Suggestion:

This RID was triggered by the Data Server discussion but is applicable to the entire Release A test plan. There is a substantial risk associated with Release A test plan. There is a substantial risk associated with Release A not providing the resources some instrument teams need to accomplish testing which must be done with the Release A system. This is written from a MODIS perspective but may be applicable to other instruments (CERES?). MODIS's primary goal for Release A testing is to see if our fundamental processing approach for end to end production of MODIS Level 1-3 products is feasible in the ECS environment. We can see if the algorithms compute correctly at our SCFs. We need to verify that individual components run correctly in the DAAC but that is not the big issue. We have an operating concept and an implementation of it that runs from Level 0 packets through the production of Level 3 data. It involves processing of a very large amount of data in a relatively tightly controlled sequence. As an example of the size of the problem: one granule of Level 1B data is about 250MB, a single day (daytime only) test set over just the U.S. is 9 granules or 2.25 GBytes. A 16 day Level 1B data set (the minimum for some products) over just the U.S. is 28 GBytes and a global data set for 16 days (also the minimum for testing Level 3 processing) is about 1200 GBytes. There are also Level 1A, Level 2 and Level 3 data sets involved. We are devoting substantial effort to develop a way to organize the data structures and the processing so that this can be done in the DAAC environment. Testing this sequence will require use of reasonable (not necessarily exact or full featured representations of the planner and scheduler and the entire data server chain. We need to understand whether there are fatal flaws in any part of the system that would require a basic redesign of our algorithms, approach or implementation. This can not be done a piece part test basis. Without end to end data flow tests it will also not be possible for ECS to identify unexpected areas which need substantial work for the Release b system. More importantly if a fatal flaw is discovered several months after Release B is available or testing it may not be possible for either the MODIS Team or the ECS implementors to identify the problem, develop an approach, implement it and test it in time to process data at launch.

Originator's Recommendation

Convene a group of people to understand this issue and identify what capabilities are necessary to support the required testing. Determine which aspects of the above testing are mission critical and which features are truly necessary. Review the plans for the Release A system and see how well it can support these requirements. Identify areas where there are inconsistencies between need and plan. Develop an approach to support the necessary tests in a timely manner. Involve the AHWGP.

GSFC Response by: Schroeder

GSFC Response Date 10/5/95

also see RIDs 31, 57, & 40

This is a requirements issues, not a design issue.

The current Release plan was approved in June 1994 with the concurrence of Codes 170 and 421. (CCR 505-01-41-40. Table 2.5-2, ECS Phased Implementation, of the ECS SOW was again modified in February 1995 (CCR 505-01-41-65) with the concurrence of Codes 170 and 421.

The current release plan was developed in response to budget constraints imposed on the ESDIS project last year. Suggested changes to the release plan would negate those cost savings. Increase cost may be expected from earlier purchase of COTS (tech curve), earlier and therefore longer operations support, additional IATO and IV&V testing.

Steve Kempler of the ESDIS project will accept an action to convene a group to understand specific issues and identify possible solutions within the budget constraints (as recommended by RID 31 originator).

HAIS Response by:

HAIS Schedule

HAIS R. E.

HAIS Response Date

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HAIS Response Date

Status **Closed**

Date Closed **10/12/95**

Sponsor **Kempler**

***** Attachment if any *****
